# Breeding of beetles-blest?nok in the laboratory for control centers of mass reproduction of dendroktona in forest crops of pine

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*Tyumen region is a zone of periodic outbreaks of pandemic Dendroctonus micans and related catastrophic desiccation of Scots pine. The first damage of pine plantations were discovered in Tyumen and Tobolsk districts of the region in the period 1949–1951. In the early 80-ies of the zone of chronic foci of mass breeding of Siberian population Dendroctonus micans already occupied Abatskii and Ishim districts. Today it is still Aromashevsky and Omutinskii areas.*

*Fighting dendroctonus existing mechanical methods in the Russian Federation, in contrast, for example, from Turkey, where 100% control measures are biological methods, it is difficult and ineffective.*

*The most promising way to combat dendroctonus in the centers of its mass reproduction in pine cultures are biotechnology, based on the use of natural self-regulating mechanisms pest internal reserves, in the form of insect predators of any pathogens. We consider the use as a bioregulator populations dendroctonus by increasing their numbers at the expense of mass reproduction in laboratory conditions. One of these in relation to the dendroctonus is one of the representatives Rhizophagus grandis Gyll.*

*The aim is to develop a technology of growing large rizofaga in the laboratory. On the basis of the laboratory of biotechnology is completely reproduced the cycle of Rhizophagus grandis Gyll – from getting to the egg of an adult insect. The technology of cultivation justified by the analysis of foreign experience entomologist Turkey, Belgium, Georgia, and its own research, consists of two main and one additional step.*

*The developed technology will in practice significantly reduce the volume of sanitary cutting to combat dendroctonus that later would eliminate them completely. Biological control eliminates the risk of expansion of the pest outbreak and spread it to uncovered areas of forest, leaving a stable ecological state of pine plantations. Test the effectiveness of this technology is planned to be an annual population of adults of Rhizophagus grandis in outbreak localities dendroctonus for 5 years at the expense of the branch VNIILM «Siberian Forest Experiment Station».*

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